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Eagle Point Solution to a Frequently Asked Question

How to Enter Survey Notes from a Transit Survey

Summary:
This document explains the process of entering transit survey points directly into a project where:

- Vertical Angle of 0° is level. Negative is downward. Positive 90° is straight up.
- All instrument point setups have the same Horizontal Angle orientation as the original instrument point setup.

Product: Eagle Point Software™ 2003
Release: 2003 Q2 or 3.2.0 and greater
Platform: All
Related documents:

As always, should you have any questions regarding any phase of installation, contact Eagle Point Technical Assistance at (800) 477-0909.

Notation Method

Button to Press *Displayed Text* **Icon** Action {Text to Enter} *Menu Item…*

From the main Eagle Point menu, click *System…* and Checkmark *Embedded CAD Menus…* to put the EP menu into the AutoCAD menus.

Set Up the Batch Recorder

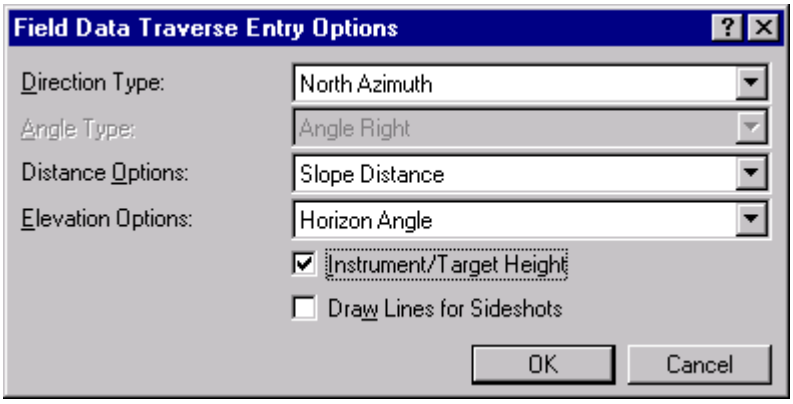
1. From AutoCAD, click *EP… COGO.* (COGO menus will appear within the CAD menu.)
2. Click *Survey… Manage Batch Files...*.
3. Click the **New Batch File** icon.
4. Input a batch file name for this survey. E.g. {Survey 1}. Click OK. Click Close.

Input the Instrument Point Node

1. Click *Nodes… Place Node.*
2. Click Batch Processing.
3. Checkmark *Batch Record*. Click Close.
4. Click Next.
5. For the Instrument Point location input the node ID. E.g. {1} Press Tab.
6. Input the Northing (assumed or known). E.g. {0} Press Tab.
7. Input the Easting (assumed or known). E.g. {0} Press Tab.
8. Input the Elevation of the IP hub (computed manually from the TBM shot). Press Tab.
9. Select *IP* for the Field Code. Press Tab.
10. Input a description. E.g. {#1 Hub NW of barn}. Click Apply.
11. Click Close.

Input the Survey Shots

1. Click *Survey… Field Data Traverse.*
2. Click Entry Options…
3. Make the following settings:



4. Click OK.
5. At the Field Data Traverse screen click in the Occupied Node ID: edit field. Input the Node of that was used for the Instrument Point. E.g. {1}. Press Tab.
6. Input the North Azimuth to the benchmark (this is the Horizontal Angle of the shot). E.g. (ddd.mmss) {60.41} for 60°41′. Press Tab.
7. Input the Slope Distance. E.g. {75}. Press Tab.
8. Input the Node ID. E.g. {501}. Press Tab.
   (use 1, 2… for IP; 201, 202… for TP; 501, 502… for TBM; 1000, 1001… for Topo).
9. Input the Horizon Angle (this is the Vertical Angle reading of the shot with 0 as a level shot) {0}. Press Tab.
10. Input the Instrument Height (distance from the H.I. down to the IP hub elevation).
    E.g. {4.83}. Press Tab.
11. Input the Target Height (Rod reading). E.g. {1.30}. Press Tab. (The elevation is displayed in the grayed-out box).
12. Change the Field Code to *TBM*. Press Tab.
13. Input the Benchmark Description to be displayed. E.g. {1x2 Hub in Fc 50' DS of CL}. Press Tab.
14. Click Sideshot.
15. From the AutoCAD menu, click *View… Zoom… Extents* to see the shots.
16. Click into the input box for North Azimuth.
17. Input the Horizontal Angle to the Topo shot. E.g. {347.20}. Press Tab.
18. Input the Slope Distance. E.g. {90}. Press Tab.
19. Input the Node ID. E.g. {1000}. Press Tab.
    (use 1, 2… for IP; 201, 202… for TP; 501, 502… for TBM; 1000, 1001… for Topo).
20. Input Horizon Angle (this is Vertical angle: 0=level) E.g. (ddd.mmss) {0.50}. Press Tab.
21. Leave the Instrument Height the same. Press Tab.
22. Input the Target Height (Rod reading). E.g. {5.3}. Press Tab.
23. Change the Field Code to *X* (X for Fence shot, use M for a miscellaneous shot that does not match the normal Codes - and then enter a good description). Press Tab.
24. Input a description to be displayed or leave blank. (None will show up for a ground shot - G). E.g. {Jct with E-W X}. Press Tab.
25. Click Sideshot.
26. Repeat Steps 17 to 27 for remaining shots.
27. When done entering info from the first setup click Close.

Input the Survey Shots after Setting Up at a New IP

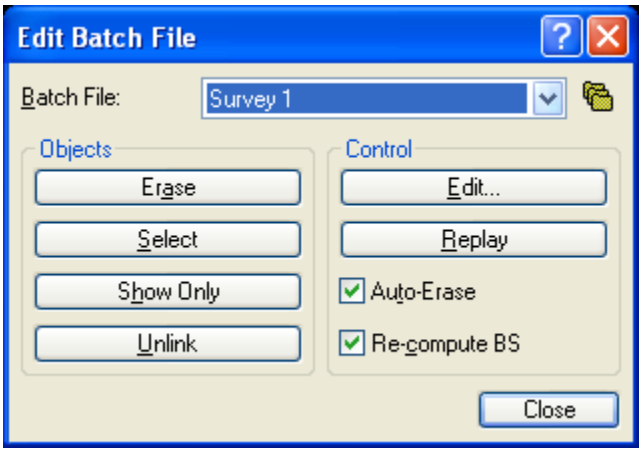
28. Click *Survey… Field Data Traverse.*
29. Click Entry Options…
30. Make the following selections:

a. Direction Type: *North Azimuth*
b. Distance Options: *Slope Distance*
c. Elevation Options: *Horizon Angle*
    i. Instrument/Target Height

31. Click OK.
32. At the Field Data Traverse screen click in the Occupied Node ID: edit field. Input the Node of that was used for the Instrument Point. E.g. {2}. Or use AutoCAD to click on the survey node. Press Tab.
33. Continue with Steps 17 to 27 (make sure you correctly use the distance from the H.I. down to the IP hub elevation for entering in as the instrument height).

Correcting Mistakes in Data Entry

1. Click *Survey… Edit Batch File.*



2. Pull down the name of the current transit survey. {Survey 1}.
3. Click Edit…
4. Make corrections to the data.
5. Click *File… Save.*
6. Click *File… Exit.*
7. Click Replay. The survey will be erased and reduced.
8. Click Close.

When done you can hide the COGO menu items: From AutoCAD, click *EP… AutoCAD.*

Submitted by Norman Friedrich.